WHAT IS CLAIMED IS:

1. A backlight device in which a plurality of light emitting units, each mounting many light emitting diodes on the same co-axial line on one surface of an interconnection substrate, are mounted on the same co-axial line to form a light emitting array, a plurality of said light emitting arrays are arranged at equal intervals on the back surface of a light transmitting liquid crystal panel, and in which the light radiated from said light emitting diodes are supplied through an optical sheet block to said liquid crystal panel to illuminate said liquid crystal panel, said backlight device comprising

a heat radiating plate formed of a metal material exhibiting heat conductivity and having a substrate fitting part for arraying a plurality of said interconnection substrates side-by-side on the same coaxial line on the major surface of said base, said heat radiating plate having upstanding reflecting plate supports formed as one therewith and extending along the lateral sides of said substrate fitting part;

a plurality of reflective sheet pieces each being formed of a sheet material exhibiting reflecting characteristics as a rectangular piece of a length corresponding to the length of said preset number of said light emitting diodes and a width smaller than the width of said heat radiating plate, each of said reflective sheet pieces including a plurality of guide through-holes through which are passed light emitting parts of said light emitting diodes; and

a reflecting plate formed from a plate material exhibiting reflective

characteristics to an outer shape approximately equal to the outer shape of said liquid crystal panel, said reflecting plate having a plurality of rows of guide openings in register with said light emitting arrays and through which are passed the light emitting parts of said light emitting diodes;

said reflecting sheet pieces being mounted to said heat radiating plates as the light emitting parts of said light emitting diodes are protruded via those of said guide through-holes facing said light emitting parts, said reflecting plate being superposed on said reflective sheet pieces and bonded in this state to said reflective plate supports of said heat radiating plates, in a manner that the light emitting diodes protruded through said guide through-holes of said reflective sheet pieces are protruded through said guide openings to face the back side of said liquid crystal panel.

2. The backlight device according to claim 2 wherein a heat pipe fitting part is formed on the bottom surface of said base formed with said substrate fitting part, over the entire longitudinal length of the bottom surface of said base formed with said substrate fitting part, and wherein heat generated from said light emitting diodes and conducted to said heat dissipating plates is transmitted to heat dissipating means by a heat pipe assembled in said heat pipe fitting part in close contact with the inner wall thereof.

3. The backlight device according to claim 1 wherein a dust-proofing elastic member is bonded to said reflective plate supports of each heat radiating plate on

each side for sealing a lateral opening of said substrate fitting part.

4. The backlight device according to claim 1 wherein each guide opening formed in said reflective plate in association with each light emitting array is formed by a a plurality of groups of guide openings arranged on the same coaxial line, with each said group being separated from a neighboring group by a bridge, with each of said groups being of a length allowing a plurality of said light emitting diodes to pass therethrough, and wherein, as said reflecting plate is bonded to said reflecting plate supports of each heat radiating plate, said bridge thrusts said reflective sheet pieces towards said heat radiating plate to hold said reflective sheet pieces.

5. The backlight device according to claim 1 wherein reflective sheet pieces are formed of an insulating polymer material, said reflecting plate is formed of aluminum as base material, an opening edge of each guide through-hole in said reflective sheet piece is protruded inwards from an opening edge of each guide opening of said reflective sheet piece in a manner of maintaining electrical insulation between said opening edge of each guide opening and a terminal part of each light emitting diode or a terminal part of an interconnection substrate.

6. A liquid crystal display apparatus comprising

a light transmitting liquid crystal panel;

a backlight section including a plurality of light emitting arrays arranged at equal intervals on one surface of an interconnection substrate, each light emitting array being composed of a plurality of light emitting units made up of a plurality of

light emitting diodes mounted on the same co-axial line, said backlight section sending out light radiated from said light emitting diodes towards said liquid crystal panel as illuminating light;

an optical converting section arranged between said liquid crystal panel and said backlight section, and formed by a laminate of a plurality of functional optical sheets for processing said illuminating light supplied from said backlight section with preset optical conversion to send the so converted illuminating light to said liquid crystal panel;

a light conducting section including a light diffusing light guide plate for diffusing said illuminating light to send the so diffused light to said liquid crystal panel and a light diffusing plate for performing light reflection/ diffusion and light transmission on said illuminated light for equalizing the brightness to supply the resulting illuminating light to said diffusing light guide plate;

a reflecting section for reflecting said light radiated from said light emitting diodes of said backlight section to the surrounding and said illuminating light reflected by said light diffusing plate towards said light conducting section; and

a heat radiating section having a heat radiating plate formed of a metal material having heat conductivity, in which the major surface of said base is formed with a substrate fitting part for carrying said interconnection substrates side-by-side on the same co-axial line in the lengthwise direction and in which said substrate fitting part is formed as one with reflective plate supports along the lateral sides of

said substrate fitting part; and

a reflecting plate including a plurality of reflective sheet pieces and a reflecting plate, said reflective sheet pieces each being formed from a sheet with reflecting properties to the shape of a rectangle having a length corresponding to a preset number of said light emitting diodes and a width smaller than the width of said heat radiating plate, said reflective sheet pieces each being provided with a large number of guide through-holes on the same axial line, through which are passed the light emitting pars of said light emitting diodes, said reflecting plate being formed by a plate member formed to an outer shape approximately equal to that of said liquid crystal panel, said reflecting plate having a plurality of rows of guide through-holes through which are passed light emitting parts of said light emitting diodes, said rows being each registering with said light emitting arrays;

said reflecting sheet pieces being mounted from one light emitting unit to another as said light emitting parts of said light emitting diodes are protruded through said guide through-holes facing the light emitting parts;

said reflecting plate being superposed on said reflective sheet pieces and bonded to said reflective plate supports of each heat radiating plate as said light emitting diodes protruded from said guide through-holes are protruded through said guide openings.

7. The liquid crystal display apparatus according to claim 6 wherein said heat dissipating section is made up by each of said heat radiating plates and a heat pipe

assembled in a heat pipe fitting part, formed over the entire area along the length of said bottom surface of said base of said heat dissipating plate formed with said substrate fitting part, over the entire length of said bottom surface, as said heat pipe is in tight contact with the inner wall of said heat pipe fitting part, said heat dissipating section transmitting the heat evolved in each light emitting diode to each of said heat radiating plates and transmitting said heat by said heat pipe to heat radiating means.

8. The liquid crystal display apparatus according to claim 6 wherein each guide opening formed in said reflective plate in association with each light emitting array in said reflecting plate is formed by a plurality of groups of guide openings arranged on the same coaxial line, with each group of guide openings being separated from a neighboring group by a bridge for allowing a plurality of said light emitting diodes to pass therethrough, and wherein, as said reflecting plate is bonded to said reflecting plate supports of each heat radiating plate, said bridge thrusts said reflective sheet pieces towards said heat radiating plate to hold said reflective sheet pieces.

9. The liquid crystal display apparatus according to claim 6 wherein reflective sheet pieces are formed of an insulating polymer material, said reflecting plate is formed of aluminum as base material, an opening edge of each guide through-hole in said reflective sheet piece is protruded inwards from an opening edge of each guide opening of said reflective plate in a manner of maintaining electrical

insulation between an opening edge of each guide opening and a terminal part of each light emitting diode or a terminal part of an interconnection substrate.